

Equinox (All Poly) Total Stemmed Anatomic Shoulder Investigation

Note: This analysis compares the Equinox (All Poly) glenoid prosthesis with all other total stemmed anatomic shoulder prostheses.

This prosthesis has been identified as having a significantly higher rate of revision. For a detailed explanation of the process used by the Registry that results in identification of prostheses that have a higher than anticipated rate of revision please refer to the Prostheses with Higher than Anticipated Rates of Revision chapter of the most recent AOANJRR Annual Report, <https://aoanjrr.sahmri.com/annual-reports-2026>.

Note: Procedures using modular metal-backed glenoids are excluded from the comparator. Procedures using prostheses with no recorded use in 2025 are excluded from the comparator.

TABLE 1

Revision Rate of Primary Total Stemmed Anatomic Shoulder Replacement

The revision rate of the Equinox (All Poly) total stemmed anatomic shoulder prosthesis is compared to all other total stemmed anatomic shoulder prostheses.

Table 1: Revision Rates of Primary Total Stemmed Anatomic Shoulder Replacement

Component	N Revised	N Total	Obs. Years	Revisions/100 Obs. Yrs (95% CI)
Equinox (All Poly)	38	305	1969	1.93 (1.37, 2.65)
Other Total Stemmed Anatomic Shoulder	310	5453	33711	0.92 (0.82, 1.03)
TOTAL	348	5758	35680	0.98 (0.88, 1.08)

Note: Prostheses no longer used in 2025 are excluded from the comparator. Procedures using modular metal-backed glenoids are excluded from the comparator.

TABLE 2**Yearly Cumulative Percent Revision of Primary Total Stemmed Anatomic Shoulder Replacement**

The yearly cumulative percent revision of the Equinox (All Poly) total stemmed anatomic shoulder prosthesis is compared to all other total stemmed anatomic shoulder prostheses.

Table 2: Yearly Cumulative Percent Revision (95% CI) of Primary Total Stemmed Anatomic Shoulder Replacement

CPR	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs
Equinox (All Poly)	2.0 (0.9, 4.3)	5.0 (3.0, 8.1)	6.0 (3.8, 9.3)	6.4 (4.1, 9.8)	8.1 (5.4, 12.0)
Other Total Stemmed Anatomic Shoulder	2.0 (1.6, 2.4)	2.9 (2.5, 3.4)	3.5 (3.0, 4.1)	4.2 (3.7, 4.8)	4.7 (4.2, 5.4)

CPR	6 Yrs	7 Yrs	8 Yrs	9 Yrs	10 Yrs	11 Yrs
Equinox (All Poly)	10.1 (7.0, 14.5)	11.9 (8.4, 16.8)	13.4 (9.5, 18.7)	14.3 (10.1, 19.9)	20.1 (13.5, 29.3)	
Other Total Stemmed Anatomic Shoulder	5.4 (4.7, 6.1)	6.1 (5.4, 6.8)	7.0 (6.2, 7.9)	7.7 (6.8, 8.7)	8.0 (7.1, 9.1)	8.5 (7.5, 9.7)

CPR	12 Yrs	13 Yrs	14 Yrs	15 Yrs	16 Yrs	17 Yrs
Equinox (All Poly)						
Other Total Stemmed Anatomic Shoulder	9.6 (8.2, 11.1)	10.1 (8.6, 11.8)	10.1 (8.6, 11.8)	11.0 (9.1, 13.1)	11.7 (9.5, 14.3)	12.5 (9.9, 15.8)

Note: Prostheses no longer used in 2025 are excluded from the comparator. Procedures using modular metal-backed glenoids are excluded from the comparator.

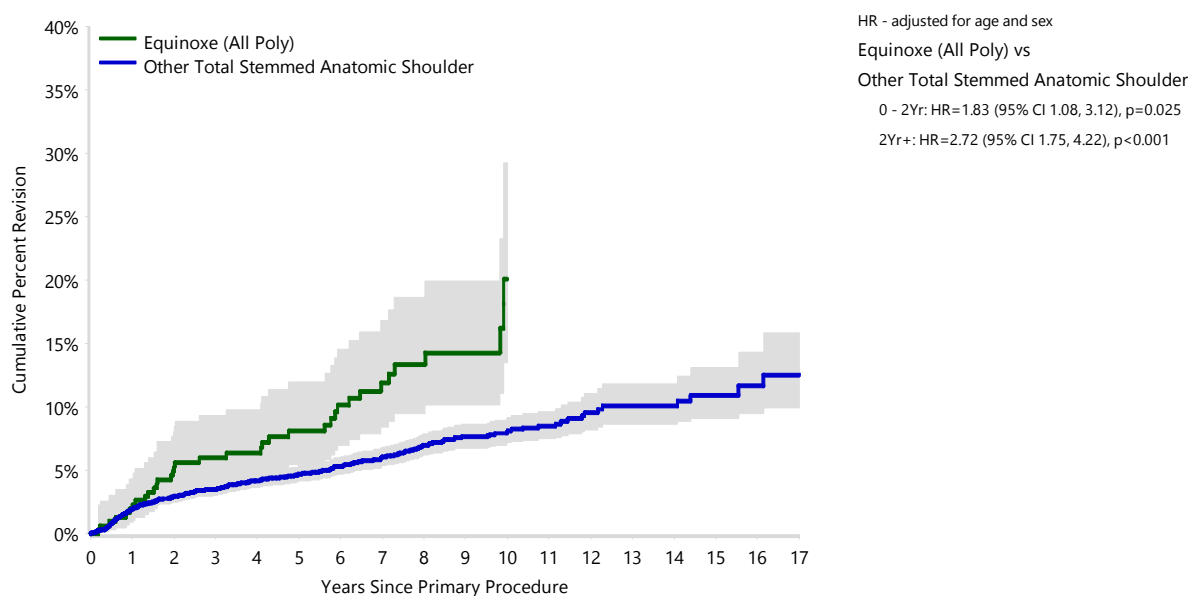
FIGURE 1

Yearly Cumulative Percent Revision of Primary Total Stemmed Anatomic Shoulder Replacement

The yearly cumulative percent revision of the Equinox (All Poly) total stemmed anatomic shoulder prosthesis is compared to all other total stemmed anatomic shoulder prostheses. In addition, hazard ratios are reported.

Hazard ratios are reported for specific time periods during which the hazard ratio is constant. This is done to enable more specific and valid comparisons of the risk of revision over time. The pattern of variation in risk has important implications with respect to the underlying reasons for any difference.

Figure 1: Cumulative Percent Revision of Primary Total Stemmed Anatomic Shoulder Replacement



Number at Risk	0 Yr	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs	6 Yrs	7 Yrs	8 Yrs	9 Yrs
Equinox (All Poly)	305	298	284	254	225	192	170	133	94	61
Other Total Stemmed Anatomic Shoulder	5453	4997	4568	4129	3627	3163	2705	2176	1705	1293

Number at Risk	10 Yrs	11 Yrs	12 Yrs	13 Yrs	14 Yrs	15 Yrs	16 Yrs	17 Yrs	18 Yrs	19 Yrs
Equinox (All Poly)	40	35	22	7	1	0	0	0	0	0
Other Total Stemmed Anatomic Shoulder	900	559	352	290	227	157	104	66	21	5

Note: Prostheses no longer used in 2025 are excluded from the comparator. Procedures using modular metal-backed glenoids are excluded from the comparator.

TABLE 3**Primary Diagnosis for Revised Primary Total Stemmed Anatomic Shoulder Replacement**

This table identifies the diagnosis of the primary procedure which was subsequently revised. This information is provided as there is a variation on outcome depending on the primary diagnosis. It is therefore important when considering the reasons for a higher than anticipated rate of revision that there is identification of the primary diagnosis. This information should be compared to the primary diagnosis for the revisions of all other total stemmed anatomic shoulder prostheses.

Table 3: Primary Diagnosis for Revised Primary Total Stemmed Anatomic Shoulder Replacement

Primary Diagnosis	Equinox (All Poly)		Other Total Stemmed Anatomic Shoulder	
	Number	Percent	Number	Percent
Osteoarthritis	35	92.1	287	92.6
Osteonecrosis			7	2.3
Rheumatoid Arthritis			6	1.9
Fracture	2	5.3	4	1.3
Other Inflammatory Arthritis			4	1.3
Instability			1	0.3
Rotator Cuff Arthropathy	1	2.6	1	0.3
TOTAL	38	100.0	310	100.0

Note: Prostheses no longer used in 2025 are excluded from the comparator. Procedures using modular metal-backed glenoids are excluded from the comparator.

TABLE 4

Reasons for Revision

This is reported in two ways: a percentage of primary procedures revised and as a percentage of all revision procedures.

% Primaries Revised: This shows the proportional contribution of each revision diagnosis as a percentage of the total number of primary procedures. This percentage can be used to approximate the risk of being revised for that diagnosis. Differing percentages between groups, with the same distribution of follow up time, may identify problems of concern.

% Revisions: The number of revisions for each diagnosis is expressed as a percentage of the total number of revisions. This shows the distribution of reasons for revision within a group but cannot be used as a comparison between groups.

Table 4: Primary Total Stemmed Anatomic Shoulder Replacement - Reason for Revision (Follow-up Limited to 14 Years)

Revision Diagnosis	Equinoxe (All Poly)			Other Total Stemmed Anatomic Shoulder		
	Number	% Primaries Revised	% Revisions	Number	% Primaries Revised	% Revisions
Rotator Cuff Insufficiency	7	2.3	18.4	85	1.6	27.8
Loosening	20	6.6	52.6	84	1.5	27.5
Instability/Dislocation	5	1.6	13.2	67	1.2	21.9
Infection	2	0.7	5.3	19	0.3	6.2
Pain				12	0.2	3.9
Lysis	1	0.3	2.6	9	0.2	2.9
Fracture	2	0.7	5.3	6	0.1	2.0
Implant Breakage Glenoid				6	0.1	2.0
Incorrect Sizing				5	0.1	1.6
Arthrofibrosis	1	0.3	2.6	3	0.1	1.0
Malposition				3	0.1	1.0
Implant Breakage Glenoid Insert				2	0.0	0.7
Dissociation				1	0.0	0.3
Metal Related Pathology				1	0.0	0.3
Wear Glenoid Insert				1	0.0	0.3
Other				2	0.0	0.7
N Revision	38	12.5	100.0	306	5.6	100.0
N Primary	305			5453		

Note: This table is restricted to revisions within 14 years for all groups to allow a time-matched comparison of revisions.

Note: Prostheses no longer used in 2025 are excluded from the comparator. Procedures using modular metal-backed glenoids are excluded from the comparator.

FIGURE 2**Cumulative Incidence Revision Diagnosis of Primary Total Stemmed Anatomic Shoulder Replacement**

This figure details the cumulative incidence of the most common reasons for revision. The five most common reasons for revision are included as long as each of these reasons account for more than 10 procedures or at least 5% of all revisions for the Equinox (All Poly) total stemmed anatomic shoulder prosthesis. A comparative graph is provided of the cumulative incidence for the same reasons for revisions for all other total stemmed anatomic shoulder prostheses.

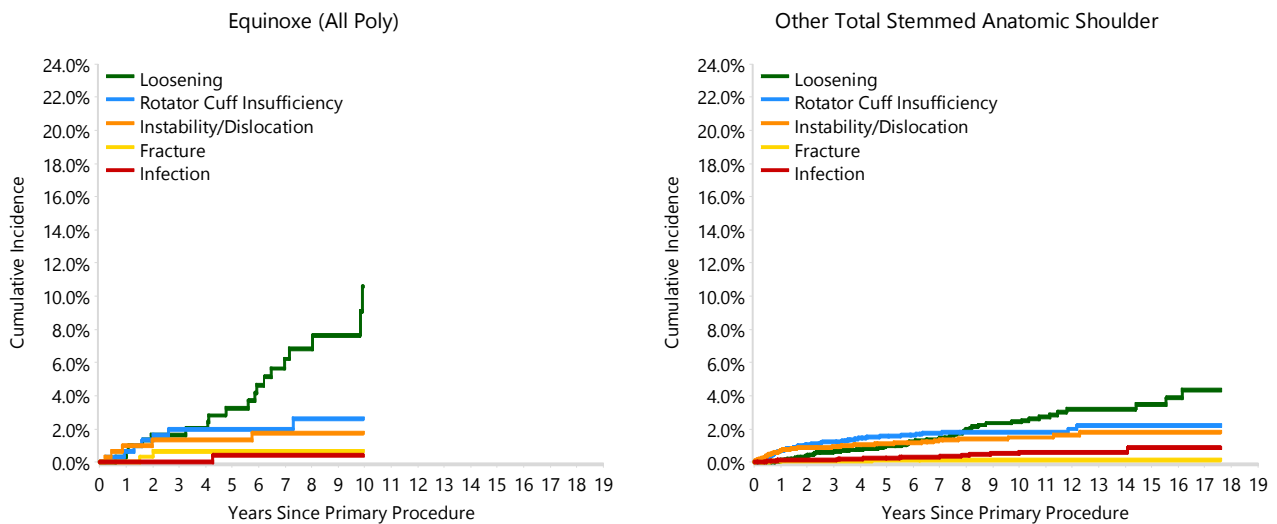
Figure 2: Cumulative Incidence Revision Diagnosis for Primary Total Stemmed Anatomic Shoulder Replacement

TABLE 5

Type of Revision Performed for Primary Total Stemmed Anatomic Shoulder Replacement

This analysis identifies the components used in the revision of the Equinox (All Poly) total stemmed anatomic shoulder prosthesis and compares it to the components used in the revision of all other total stemmed anatomic shoulder prostheses.

The reason this analysis is undertaken is to identify whether there is one or more components which are being replaced that differ from the components replaced for revisions of all other total stemmed anatomic shoulder prostheses i.e. is there a difference in the type of revision undertaken for the Equinox (All Poly) total stemmed anatomic shoulder prosthesis compared to all other total stemmed anatomic shoulder prostheses.

Table 5: Primary Total Stemmed Anatomic Shoulder Replacement - Type of Revision (Follow-up Limited to 14 Years)

Type of Revision	Equinox (All Poly)		Other Total Stemmed Anatomic Shoulder	
	Number	Percent	Number	Percent
Humeral/Glenoid	30	78.9	227	74.2
Cement Spacer	1	2.6	16	5.2
Humeral Component	2	5.3	13	4.2
Glenoid Component	3	7.9	12	3.9
Removal of Prostheses			3	1.0
N Major	36	94.7	271	88.6
Head Only	2	5.3	33	10.8
Cup Only			1	0.3
Reoperation			1	0.3
N Minor	2	5.3	35	11.4
TOTAL	38	100.0	306	100.0

Note: This table is restricted to revisions within 14 years for all groups to allow a time-matched comparison of revisions.

Note: Prostheses no longer used in 2025 are excluded from the comparator. Procedures using modular metal-backed glenoids are excluded from the comparator.

TABLE 6**Revision Rates of Equinox (All Poly) Primary Total Stemmed Anatomic Shoulder Replacement by Fixation**

This analysis is provided as some prostheses have more than one fixation option. Additionally there are prostheses where an alternative to the recommended approach to fixation was used e.g. a cementless prosthesis that has been cemented or vice-versa.

Table 6: Revised Number of Equinox (All Poly) Primary Total Stemmed Anatomic Shoulder Replacement by Fixation

Fixation	N Revised	N Total
Cemented	2	27
Hybrid (Glenoid Cemented)	36	278
TOTAL	38	305

TABLE 7**Revision Rates of Equinox (All Poly) Primary Total Stemmed Anatomic Shoulder Replacement by Bearing Surface**

This analysis is provided as some prostheses are combined with a variety of bearing surfaces. All bearing surfaces used with this prosthesis are listed.

Table 7: Revised Number of Equinox (All Poly) Primary Total Stemmed Anatomic Shoulder Replacement by Bearing Surface

Bearing Surface	N Revised	N Total
Metal/Non XLPE	38	305
TOTAL	38	305

TABLE 8**Revision Rates of Primary Total Stemmed Anatomic Shoulder Replacement by State**

This enables a state by state variation to be identified for the Equinox (All Poly) total stemmed anatomic shoulder prosthesis and provides the comparative data for each of the states for all other total stemmed anatomic shoulder prostheses.

The purpose of this analysis is to determine if the higher than anticipated rate of revision has widespread distribution between states. If there is widespread distribution then the reason for the higher than anticipated rate of revision is unlikely to be surgeon specific. If the prosthesis has been used in only a small number of states it is not possible to distinguish if the higher than anticipated rate of revision is related to the prosthesis, surgeon, technique or patient.

Table 8: Revised Number of Primary Total Stemmed Anatomic Shoulder Replacement by State

Component	State	N Revised	N Total
Equinox (All Poly)	NSW	5	14
	VIC	11	160
	QLD	2	15
	WA	20	113
	TAS	0	2
	ACT/NT	0	1
Other Total Stemmed Anatomic Shoulder	NSW	79	1712
	VIC	96	1346
	QLD	62	1133
	WA	31	452
	SA	25	572
	TAS	5	93
	ACT/NT	12	145
TOTAL		348	5758

Note: Prostheses no longer used in 2025 are excluded from the comparator. Procedures using modular metal-backed glenoids are excluded from the comparator.

TABLE 9**Number of Revisions of Equinox (All Poly) Primary Total Stemmed Anatomic Shoulder Replacement by Year of Implant**

This analysis details the number of prostheses reported each year to the Registry for the Equinox (All Poly) total stemmed anatomic shoulder prosthesis. It also provides the subsequent number of revisions of the primaries reported in that year.

Primary procedures performed in later years have had less follow up time therefore the number revised is expected to be less than the number revised in earlier years. For example, a primary procedure performed in 2025 has a maximum of one year to be revised, whereas a primary procedure performed in 2023 has a maximum of three years to be revised.

Table 9: Number of Revisions of Equinox (All Poly) Primary Total Stemmed Anatomic Shoulder Replacement by Year of Implant

Year of Implant	Number Revised	Total Number
2011	4	6
2012	3	10
2013	6	26
2014	1	18
2015	4	8
2016	3	23
2017	5	36
2018	3	45
2019	4	37
2020	1	18
2021	2	28
2022	2	24
2023	0	24
2024	0	2
TOTAL	38	305

TABLE 10

Revision Rates of Equinox (All Poly) Primary Total Stemmed Anatomic Shoulder Replacement by Catalogue Number Range

Many prostheses have a number of catalogue ranges. The catalogue range is specific to particular design features; more than one catalogue range usually indicates a minor difference in design in a particular Equinox (All Poly) prosthesis.

This analysis has been undertaken to determine if the revision rate varies according to the catalogue number range.

Model	Catalogue Range	Catalogue Description	Cement	Material
Glenoid				
Equinox	3140102-3140114	ALL POLY CEMENTED KEELED GLENOID	YES	NON CROSS-LINKED POLYETHYLENE
Equinox	3140202-3140214	ALL POLY CEMENTED PEGGED GLENOID	YES	NON CROSS-LINKED POLYETHYLENE
Equinox	3140222-3140634	POSTERIOR AUGMENT CEMENTED PEGGED GLENOID	YES	NON CROSS-LINKED POLYETHYLENE

Table 10: Revised Number of Equinox (All Poly) Primary Total Stemmed Anatomic Shoulder Replacement by Catalogue Number Range

Glenoid Range	N Revised	N Total
3140102-3140114	1	7
3140202-3140214	31	256
3140222-3140634	6	42
TOTAL	38	305

TABLE 11**Revision Rates of Equinox (All Poly) Primary Total Stemmed Anatomic Shoulder Replacement by Component**

A prosthesis may be combined with multiple components. This analysis has been undertaken to determine if the revision rate varies according to the component with which it is combined.

Table 11: Revised Number of Equinox (All Poly) Primary Total Stemmed Anatomic Shoulder Replacement by Humeral Stem Component

Humeral Stem Component	N Revised	N Total
Equinox	38	305
TOTAL	38	305